Life and Death of Jean Cavaillès
Georges Canguilhem

ed., trans. Camille Akmut
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alternative title :
Three talks of Georges Canguilhem on Jean Cavaillès
(or, simply, 'Georges Canguilhem on Jean Cavaillès')

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Motivation/Preface : Done in the eightieth year since Cavaillès' death, this second translation is, without reference to our first, accomplished in the hope that the experience gained by the author in the intermediary period, in particular recent publication of *The formation of the concept of reflex*, will be beneficial (it is generally expected to be more accurate, but may be less vibrant or poetic on occasion - for worse and better).

"Now ... imagine this philosopher thoughtful and fearless both, executing acts of terrorism with his own hands."
[20]

INAUGURATION
OF THE JEAN CAVAILLÈS LECTURE HALL
AT THE NEW
FACULTY OF LETTERS OF STRASBOURG
(May 9th, 1967)

Missus (Mesdames) and Misses,
Misters,
students,

The life[1], the career and the destiny of Jean Cavaillès can be summed up in few words. Born in 1903, son of an officer, of Protestant religion, an initial scientific formation, student of the École Normale Supérieure in 1923, holder of a bachelor in mathematical sciences, student bursary/scholarship of the Rockfeller foundation[2] for a stay in Germany, professor at the high school of Amiens, doctor ès lettres [of letters] in 1938, lecturer[3] in logic and general philosophy at the Faculty of letters of Strasbourg; mobilized in 1939 as officer of the corps franc[4], then as cypher/crypto officer[5], prisoner of the German in June 1940, evaded/escaped, returned in October to the University of Strasbourg folded back to Clermont-Ferrand, designated/named in 1941 by the Faculty of letters of the Sorbonne as substitute professor of logic, co-founder of the resistance movement *Cohors*, arrested by the French police in August 1942, interned in Montpellier[6]

[1]trans. note : this first talk is divided into roughly two parts : pp. 11-23 life, and pp. 23 f. the philosophy. This rough division is only given as an indication or overview; C. attempts the hard task of linking one to the other, action and introspection or thought (especially in the second part and the discussion of the influence of Spinoza for ex.). The transition is introduced by "*We have now reached the point where we must cease imagining to try to understand what the action of Cavaillès owed to his philosophy.*"

[2]trans. note : the French edition contains an error in this location, "*la fondation Rockfeller* [sic]"... Note the Hermann edition of the same ensemble of texts, published under the title 'In Memoriam', does not feature the same mistake.

[3]trans. note : maître de conférences.

[4]trans. note : an irregular force, civil or paramilitary, using guerrilla or harassment tactics. For reasons obviously derived from context, choosing the loanword of Freikorps adopted in the English language from German, would be completely inappropriate here.

[5]trans. note : officier du Chiffre (lit.. ... of the Number).

[6]trans. note : Cavaillès, in the military prison of Montpellier and the internment camp of Saint-Paul d'Eyjeaux, in 1942 wrote the manuscript for what would become *Sur la logique et la théorie de la science* ['On logic and the theory of science'] in 1947 thanks to Georges Canguilhem and Charles Ehresmann. (Cf. Huisman's presentation in the Complete works of philosophy of science : Oeuvres complètes de philosophie des sciences, Hermann - from now on abbreviated OCPS.)

then in Saint-Paul d'Eyjeaux[7], evaded/escapee in December 1942, arrested by German counter-espionage in August 1943, revoked by the government of Vichy, shot by the Germans and buried in the Citadel of Arras [Citadelle d'Arras] in February 1944, Companion of the Liberation[8] and Chevalier of the Legion of Honour[9] posthumously.

It is the first time that I have been invited and brought/led to talk about Cavaillès, in the very same faculty where he had been professor. In its second issue of the year 1945, the *Bulletin of the Faculty of letters of Strasbourg*[10] has reproduced the allocution[11] of Henri Cartan[12], then professor in your Faculty of sciences, and mine, allocution pronounced at the Sorbonne on the occasion of a commemorative ceremony organized by the University of Paris and the Resistance organizations. 1945-1967, there is almost a quarter of a century. The times have changed as much as the locations/places. How can one/does one properly[13], in 1967 and in Strasbourg, talk about a philosopher of the Resistance, shot by the Germans in 1944? Talk about it in a city over which floats, as if a wish or an anticipation, the flag of Europe, in Strasbourg to which the new bridge of Kehl loans its mild slope for relaxed relations with the right bank of the Rhine?[14] Is it suitable[15] to leave

[7]trans. note : village in the Limousin region. From what we understand among the camp's interned were political prisoners, including communists. In *The 25th Hour*, from 1967 also, by Verneuil, the following dialogue unfolds with the protagonist : "- [Don't talk to him!] The political prisoners have it the worst. - But, I know him, he's my friend. He's a writer. - Then he probably told the truth."

[8]trans. note : Compagnon de la Libération - an honorary title as is the. more widely known, Chevalier... Of single rank.

[9]trans. note : (Chevalier being the lowest rank.)

[10]trans. note : *Bulletin de la Faculté des lettres de Strasbourg* i.t.o..*The formation of the concept of reflex* (1955) was also undertaken in Strasbourg and uses similar sources as the Bulletin except as it pertains to medicine.

[11]trans. note : alternatively, address.

[12]trans. note : Cartan is described a "faithful friend" of Cav. (c.f. "Transfini et continu", editor's warning). He also wrote the preface for Axiomatic method and formalism.

[13]trans. note : convient-il.

[14]trans. note : In Strasbourg major European institutions of the post-War period were established : the Council of Europe (1949) and the European Parliament (1952).

[15]trans. note : convient-il.

floating over our memories the mist of time which would soften its contours? Is it on the contrary a duty to revive these contours in the bloody glow of a firing squad? I have seriously asked myself that question and have chosen[16], concerning the man and his military action, to not blur any of the reasons, facts and effects of that epoch, since it remains true that this action had reasons, did create facts, and has led to/driven effects that history can color differently but that it cannot abolish.

It is fashionable, today, among students, to complain about not having the professors they deserve, just as, among professors, to complain about not having always students worthy of their value. These are consequences of the great number.[17] Now place yourself in the stead of this handful of Strasbourg students, your elders, among whom one of your masters/teachers, and who were, in 1938, the first students of Jean Cavaillès. Imagine a young professor with a slightly bent stature, but with a resolute walk, of a pensive and obstinate but radiant forehead, a behavior at once secret and cordial, but a sensibility that is lively. This man is seductive and derisive, cheerful[playful] and solitary, he lives on conceptual

[16]trans. note : the correct writing of history, in particular the judgment passed from the present (point of view) over the past, is a major concern in *The formation...*

[17]trans. note : as a reminder, the talk is held in May of 1967, at the verge of the student protests and, ensuing, mass higher education (an effect of which would be the dismantlement of the old University of Paris, or Sorbonne, into a multitude of universities...).

massification of (altern.)

rigor, but also off music and poetry. He is profoundly attached to a family[18] whose culture does not make him cede / give up on moral elevation and the sincerity of faith. Imagine, arriving in Strasbourg, and before/in front of his students, the man who, at the very moment when Bourbaki began to propose to the world a new mode of mathematical thought, nourishes the ambition to strip, he, in France, the philosophy of mathematics from [rough] historical approximation[19], in order to make it a strict discipline, with a rigor analogous to that of the discipline which it takes for object. He knows where inside philosophical speculation there is a place to take, which awaits him like destiny. For Cavaillès never had the impression that by choosing what he did, he was the master of his [own] choices, or that by pursuing what he had begun he remained free to recover or start again. At the moment when / As he was working on his thesis, he wrote to his sister this which goes much further than a thesis : "I assure you that if I am doing my thesis[20], it is neither out of ambition for a career — in which I am more than ever disinterested — neither out of naivety and the belief that it will be useful to philosophy, but because it is in the process of becoming and that things, even a thesis in philosophy, have an essence to which we can participate

[18]trans. note : Cav. was especially attached and close to his sister, Gabrielle, who wrote a biography giving many insights into the life of this - military - family including frequent moving (Gabrielle Ferrières, nee Cavaillès). Afterwards, C. quotes a letter exchanged between brother and sister on Cavaillès' research having assumed a life of its own... (from that same biography).

[19]trans. note : l'à peu près historique.

[20]trans. note : *Méthode axiomatique et formalisme (Essai sur le problème du fondement des mathématiques)* ['Axiomatic method and formalism (Essay on the problem of the foundation of mathematics*)'] was the principal thesis of Cavaillès, submitted in February 1937. The complementary thesis, *Remarques sur la formation de la théorie abstraite des ensembles* ['Remarks on the formation of the abstract theory of ensembles'], submitted in July. C.f. Axiomatic method and formalism in OCPS. *also or better known as the dispute over the foundations of mathematics.

but in such a way that there would be a kind of sin in interrupting the collaboration (1)". A day would come when Cavaillès would choose another task, in whose essence he would feel bound to necessarily participate, to the death.

You won't forget that this professor, newly come to Strasbourg, knew much, and through direct ways, about the Germans and the Germany of that epoch. He stayed there as a grant holder, he returned many times, he worked in the universities, in Berlin, in Hamburg, in Göttingen[21], in Munich, in Freiburg, he frequented the youth movements. It is, most often, in Germany that he was led to judge the French exterior or interior politics during the thirties. In Hamburg, he was able to see the socialists of the Free City unite "in a same homage Bismarck, founder of the First Empire, and Ebert, conservative of the second (2)". In Munich, in 1931, he heard a demagogue in boots proclaim in the brasseries ; in 1934, he read *Mein Kampf* ; in 1936, he

1. Gabrielle Ferrières : Jean Cavaillès, philosophe et combattant, P.U.F., p. 97.
2. *Ibid.*, p. 79.

[21] trans. note : in Göttingen, Cav. worked with the German mathematician Emmy Noether on an edition of the Georg Cantor and Richard Dedekind correspondence, published in 1937; In the preface he speaks of pleasant memories, "those Göttingen days where we got to experience the gracious welcome of Miss Noether". (See *Briefwechsel Cantor-Dedekind*, Hermann, p. 9.)

meets in Altona[22] opponents of the Hitler regime who only escaped by a miracle — and for how long? — to the concentration camp (1). In 1931, he had paid, in Freiburg, a visit to Husserl, old man [rendered] bitter by his loss of influence to the benefit of Heidegger (2). Hence be assured that when he walked — for he knows how to stroll — the streets of Strasbourg, that when he reads the local press, many things, many facts, many gestures, take on the meaning for him that they need to, or that one day it will be required to give to them.

This professor, son of an officer, the war come, is a lieutenant in the corps franc and commands a colonial infantry section/platoon before Forbach[23]. He wins there a first citation in the order of the division, for the audacity and success of the support actions[24] that he directs. The war getting stuck / being stalemated in a prospective state[25], he is caught inside the collapse of the French military and captured by the German troups. Imagine now Cavaillès [as a] prisoner, to whom the German

1. Ibid., p. 118.
2. Ibid., p. 90.

[22]trans. note : neighborhood of Hamburg with a heterogeneous or progressive character (due to amalgamation, juxtaposition of mixed crowds, from the Lumpenproletariat of Marx to upper-middle class family areas).

[23]trans. note : North-Eastern French city close to the German border.

[24]trans. note : coups de main, i.e. helping hands (corps franc speak for what we translated as 'support actions').

[25]trans. note : l'expectative.

officer in charge of interrogation throws as if to measure the fall of his country : "You lasted less longer than Poland"*, to whom an old French farmer of Bapeaume addressed this collective reproach : "We, in that other War, we didn't surrender / turn ourselves in". Cavaillès escapes and, through Belgium, joins/reached Lille. Reckless bet / Bet by a daredevil? or lucid decision to not accept the facts for after all, they are only facts? or else, once more, this feeling/sentiment, so profound, so permanent, to be constrained/forced in the participation of an essential task, once glimpsed/perceived? A hounded academic goes first to the university, like the priest goes ring to the convent. Imagine Cavaillès, escapee and threatened, to whom a high persona of the University of Little declares : "But Cavaillès you deserted!", as if the resigned acceptance of captivity was a military obligation, or civic, or moral. Cavaillès could have felt hurt by the pusillanimous/cowardly assimilation of evasion with desertion if his evasion had been a retreat before the perspective of a long captivity, if he had only taken a momentary risk in the hopes of recovering, in case of success, the peaceful occupation of a professor or the intellectual activity of a researcher who,

* In German, it would be something along << Sie haben weniger lang' gehalten als Polen. >>

for now, considered having consented long enough to the adventure. But Cavaillès did not return to his defeated country in order to put on the slippers of the writer and "preserve his brain for France".

Whatever may have been, in 1940, the reasons and the causes for our military defeat, and whatever judgment may have been passed on them, it remained, and its remains, that the occupation was humiliating in the immediate [term], slavery in the long [term]. One should think themselves very familiar with the ways and designs of the Providence in order to read there a promise of moral buyback; one had to have a very big avidity for power to find there the occasion of a political regeneration or a social revolution. And on the other hand, if not all Germans were Nazis, it remained, and it remains, that [the] Nazism was not a philosophy. After reading[26] *Mein Kampf* in 1934, Cavaillès wrote : "It is characteristic for this people that before even being in power — or in retreat like Napoleon — their chief should feel the need to lay 600 tight pages ; all finished in pseudo-philosophy(1)". As for myself, I would prefer to

1. *Ibid.*, p. 203.

[26] trans. note : by which point the book had been published for a decade.

say : counter-philosophy, insofar as the principle of this systematization, improvised for the ends of collective conditioning, consisted in the absolute hatred and refusal of the universal. That being so, let us not be surprised to see Cavaillès, without balancing, draw nothing from the events but a reason to continue the fight / fighting, struggling.

Having found again his Faculty, in Clermont-Ferrand, in the so-called free zone, Cavaillès resumes his teaching and starts to make contacts in order to set up a Resistance organization. I cannot report his activity in all details. With Jean Rochon, sub editor of the newspaper *La Montagne*[27], who should die during/in deportation, Cavaillès looked for the means of a clandestine publication. With Emmanuel d'Astier de la Vigerie, he founds the movement *Libération Sud*. I saw Cavaillès and d'Astier, on a garden bench, in one of the interior courts of the Faculty of letters of Clermont-Ferrand, draft the manifesto of the movement. Strasbourg remains always present in/to the thought of Cavaillès. It is him that reach through a clandestine network the reproduction of a German poster then placarded on your walls, on which can be seen a German broom pushing

[27] trans. note : newspaper based in Clermont-Ferrand.

in a rubbish/garbage/trash can/bin a Gallic rooster, a bust of Marianne, a Basque beret, under the inscription : *Hinaus mit dem welschen Plunder*(1)*!* This tract whose cliche[é]/picture was first shot/taken in Toulouse is one of the first illustrations that figure in the French clandestine press. But it would be to be mistaken on the character of Cavaillès to believe that he could have given himself content with the enterprise, besides in itself already dangerous enough, that consisted in animating a movement of opinion, to draft/write manifestos or analyses. The last object, the final objective of an enterprise of this order was indeed to create/arouse an active and armed resistance. Since the spoken word and the written word should end in action, which is to say ~~to the~~ hand son and ~~to~~ on his gestures, Cavaillès thought that it was first with his hand that he should accomplish gestures of defense and offense opposition. Therefore the foundation by him of a military network, by the name of *Cohors*.[28] I'll summarize/abbreviate. Imagine now Cavaillès directing, ordering operations of intelligence and of sabotage, imagine this philosopher at once thoughtful and fearless, executing acts of terrorism personally. Imagine him arrested on a,

map [live]

1. "Out, with the French bric-a-brac [riff raff]!"

[28] trans. note : at the risk of being reproached to find hackers everywhere, the various acts of Cavaillès — 1. a scientific formation with an interdisciplinary orientation 2. (improvised) cypher activities 3. establishment of social-political movements 4. creation of organs of publication 5. finally a militant, organized network of action — bring him close to that tradition.

make

beach of the Languedoc, after the failure of a boarding attempt for England, prisoner this time of the French, only dreaming this time again of an evasion, which he succeeds in doing yet again. From London which he successfully reached, in February of 1943, where he stayed for two months, Cavaillès returns charged with missions more dangerous still than in the past. He ceases, at this point, any activity in the directing committees of Resistance movements, in order to preserve all of his energy for military action. It is then that he will see his clandestine network severely disorganized by numerous arrests.[29] Imagine one of your young professors introducing themselves, wearing a boilersuit/coveralls[30], in the base of submarines that the Kriegsmarine[31] had set in stone in Lorient. Do you think that behind the mask of simplicity of an attentive worker, Carrière, that's to say Cavaillès[32], can not be in the belief that he is putting his life on the line? That friend was mistaken who had said that the Resistance had been the "great/big vacations" of Cavaillès. When I met Cavaillès for the last time, in May 1943, in a restaurant of/on Sèvres street[33], where his adjunct Jean Gosset* came to join us, former student of the École Normale Supérieure, agrégé[34] of philosophy, who died in/during deportation, I can

[29]trans. note : If the information that is available to us is correct, the Cohors network had about a thousand members working under pseudonyms.

[30]trans. note : bleu de chauffe.

[31]trans. note : the German that is Nazi navy.

[32]trans. note : Parallels with the hacker tradition, however anachronistic, are again given, here by the common, shared practice of pseudonyms. (c.f. Vinge's *True Names* for an illustration from science fiction.)

[33]trans. note : the implied location is Paris.

[34]trans. note : a certification that allows no direct or easy translation, owing to French educational peculiarities; the *agrégé* is so called for having passed the *agrégation*, highest and most prestigious examination for teachers in secondary education and beyond.

* After publication, we wondered if Gosset was not the man that can be seen to the right of Cavaillès, in the picture that we reproduce at the beginning.

than (under)

affirm that he felt less in vacation in pending arrest. A few weeks later, it's again the arrest, the torture and the death. Cavaillès was executed at the beginning of the year 1944, in Arras, following the condemnation to death by a military tribunal. For those who discovered his corpse, in a common grave, in a corner of the citadel, where he was the *Unknown n°5*. I often thought that one couldn't have found, if one had searched for it, a more moving epitaph for a philosopher mathematician : five, the Pythagorean sum of the first odd and the first even [number][35], and the unknown, this limit of thought that the philosophy at times exalts at times exorcises, whereas mathematics reduces it calmly through calculation.

There were many ways to be dignified and courageous during the Occupation, of which many, for having been that of men and women of modest condition, are barely known more than by their authors. What makes the conduct of Cavaillès exemplary is that having assumed lucidly at a national scale, a responsibility of a chief, he led his action as a duty, without political ambition — which does not mean without political conscience, without political reach —

[35]trans. note : $5 = 1^2 + 2^2$ (5 is the first Pythagorean prime, where n equals one).

without deferred personal vision. Cavaillès exercised/exerted his function of chief in the spirit of an executor. We have now reached the point where one must cease to imagine, in order to try to understand what the action of Cavaillès got from his philosophy.

In a sense, Cavaillès did not write enough[36] so that one could summarize him; in another sense, he said enough of it so that we can grasp, in spite of the tragic interruption, the sense/meaning/direction of his philosophical discourse. When the time came to choose his thesis subject/topic, he had first thought of a work on [the calculation of] probabilities, then abandoned this project which carried the risk, he said, of carrying him over to / dragging him towards physics. On the contrary, group theory[37], in which he had been initiated over the course of his studies of mathematics, seemed to him that it should highlight, through the intellectual steps and events/adventures of its formation in the XIXth century, through the internal reason of the upheavals that it had provoked in the mathematical disciplines ancient and classical, the specificity of mathematics as an autonomous and pure science. The complementary thesis : *Remarks on the formation of the abstract theory of ensembles*[38], and the principal thesis, *Axiomatic method and formalism*[39], in which were put to the test[40] an

[36]trans. note : complete works of philosophy of science by Cavaillès. at Hermann, is 700 pages long.
[37]trans. note : la théorie des ensembles.
[38]trans. note : *Remarques sur la formation de la théorie abstraite des ensembles* i.t.o..
[39]trans. note : *Méthode axiomatique et formalisme* i.t.o..
[40]trans. note : la mise à l'épreuve.

idea that very early on came to him, that mathematics only progresses by refutation of the intuition and only enriches by abstraction, that as a consequence the history of mathematical thought is that of a reciprocal determination of its diverse/various branches "without the intervention of historical contingency(1)". This idea has been formulated in an even more striking fashion, in a posthumous study that his friend Jean Lameere, professor at Université libre de Bruxelles, who died last year, published in 1949, in *Revue Internationale de Philosophie* : "As gratuitous as can appear the invention of a method, the development of the whole mathematics is done following a necessary rhythm... To detail its modalities by examining from closer this history, which is not a history, can help understand, not in any case to define, if definition means/signifies reduction(2)". Hence understanding the creation of a mathematical theory is not a matter of psychology[41], nor of history, in the ordinary sense, even when the history of sciences is concerned, so often treated as

1. G. Ferrières, *op. cit.*, p. 69.
2. Cited article, p. 164.

[41] trans. note : the rejection of psychology is a recurrent theme in Cavaillès (see below).

natural history. During the defense of his thesis, Cavaillès responded to one of his examiners/judges who reproached to him to not have sufficiently taken into account the psychology of mathematics : "Monsieur/Mister, this problem is in no way/fashion that which I examine and has/holds no interest for it."[42]

One of the "historical contingencies" that historians or philosophers of mathematics sometimes happen to take into consideration, is the solicitation that at a given point physics, being out of methods of calculation, addresses to mathematicians. Cavaillès encountered this thesis, made explicit in the form of an objection[43], during the Conversations/Discussions of Amersfoort[44] in 1938. He responded that the succession of schematizations that link [the] sensory intuition to [the] thought is not, forasmuch/even so, chained to some historical[45], and he added : "Whatever may be the importance of suggestions from physics for the position of new mathematical problems and the building/construction/edification of new theories, the authentic development of mathematics under the accidents of history is oriented by an internal dialectic of notions." Cavaillès thus refuted, in advance, the interpretation that Marxist philosophers of good will, and no doubt good faith,

[42]trans. note : The rejection of psychology is central in the work of Cavaillès : It opens 'Sur la logique et la théorie de la science' [On logic and the theory of science], which begins with the, devastating, phrase : "*To make use of psychology, according to the Course on logic of Kant, is as absurd as drawing morals from life.*" (maybe the consequence of the feedback received during thesis defense). Not only that but it also closes it : "*It is not a philosophy of the consciousness but a philosophy of the concept*". The same distaste for or at least critique of psychology is found in Canguilhem also (according to whom this, abysmal, discipline leads in one direction to the university, in the other to the next nearest police station...)

c.f. (What is Psychology?)

[43]trans. note : as far as we know, the objection came from Ferdinand Gonseth. Talks of Amersfoort were published by Hermann as number 850 of its collection *Actualités Scientifiques et Industrielles*, abbreviated commonly as ASI, in 1939. Cavaillès' and Gonseth's contributions are found in the succession of pp. 40-43 and 43-48. (In that same collection Briefwechsel is 518, for example. Axiomatic method and formalism begins from 608. etc.)

[44]trans. note : Entretiens d'Amersfoort.

[45]trans. note : de l'historique, i.e. that which is of historical character. Typical substantivization favored by, in particular, French philosophers - Canguilhem being no exception. See our more lengthy note on the practice in *Formation...*

had wished/intended to give to the last phrase/sentence of the posthumous text *On logic and the theory of science*[46], as if by invoking a dialectic of concepts, Cavaillès had carried water to the mill of that dialectic which gives birth to any idea based on the sensible world, including mathematics.[47] More clairvoyant was Gilles Gaston-Granger when he gave for title to his account of that same work : *Jean Cavaillès ou la montée vers Spinoza* [... or the rise towards Spinoza]. And, indeed, according to Cavaillès the development of a mathematical essence owes nothing to existence.

Cavaillès has always read, studied, and one could say practiced Spinoza. He found in him, despite his hardness, more true spiritual life than in Leibniz or in Malebranche. And it is to Spinoza that he came back after having been disappointed by Husserl. It is certain that at one point he hoped to find the phenomenological method a rigorous means of intelligibility towards the conditions of creation of mathematical theories. As the text *On logic and the theory of science*, the study published by the *Revue Internationale de Philosophie* (n° 8, 1949) under the title : "Mathematics and formalism"[48] ends on the phrase/sentence rich in possibilities of interpretation : "Mathematical activity is an object of analysis and possesses an essence; but

[46] trans. note : *Sur la logique et la théorie de la science* ends : "[The] progress is material or between singular essences, its motor the exigency/requirement of the overcoming of each of them. It is not a philosophy of the consciousness but a philosophy of the concept that can give a doctrine to science. The generative necessity is not that of an activity, but of a dialectic."

[47] trans. note : Canguilhem means probably the parts of Marxism entailed in works like *The German Ideology*. ideas of infrastructure and superstructure, and reflections.

[48] trans. note : Mathématiques et formalisme i.t.o..

like a smell or a sound, it is itself". Cavaillès heard Husserl, in 1929, come to Paris for his lectures out of which came the *Cartesian Meditations*; we saw that he paid him a visit in Freiburg, in 1931; he is, with Jean-Paul Sartre — who made an entirely different use of it — one of the first philosophers of his generation to have had access to a philosophy that we ignored for the most part / most of us. It is only more remarkable to see Cavaillès in his study on the theory of science, measure the limits of the phenomenology as for his own problem : how give an account of the essential sequences[49] in the destiny of mathematics? The "I cannot otherwise" of the eidetic variation[50] where phenomenology seeks the foundation of [the] necessity is, for Cavaillès, the abdication of any thought. It is thus finally a philosophy of mathematics without mathematifying *Cogito* that he sought who reproached to Husserl, in a letter written to Léon Brunschvicq, "an exhorbitant use/usage of the *Cogito*(1)". And it is because the philosophy of Spinoza represents the

1. G. Ferrières, *op. cit.*, p. 161.

[49]trans. note : enchaînements.

[50]trans. note : eidetic doctrine is explained by Husserl in *Ideen* / Ideas (whose first book is a "general introduction to pure phenomenology").

most radical attempt of a philosophy without *Cogito* that it was so close to Cavaillès, so present to him when he needed to explain as well the idea of his fight as Resistance member as the idea of the construction of mathematics. In 1943, in London, he said to / told Raymond Aron : "I am Spinozist, I believe that everywhere we grasp [some] necessary. Necessary the sequences of the mathematicians, necessary even the steps of mathematical science, necessary also this struggle that we carry on." I will say it again, believing now to have justified it : Cavaillès, chief of Resistance fighters, has conducted himself as the executor of an essential task, of a profound philosophical sense/meaning/direction.

One should know that it was in the few meager/rare moments of leisure extracted from his activity as a clandestine fighter that Cavaillès began, in the captivity of Montpeller and of Saint-Paul d'Eyjeaux, that he continued, and completed, this "Introduction a l'oeuvre de logique" [Introduction to the work of logic] which will never see the light of day, this text to which Charles Ehresmann and myself have given the title *Sur la logique et la théorie de la science*. This text of which I have reminded of some of the commentaries that it produced, ends with a few pages that have long appeared to many, and first to myself, long enigmatic. We

can understand today that the enigma had the value of an annunciation. Cavaillès has assigned, twenty years in advance, to philosophy the task that it is in the process of recognizing as its own (now/today : substituting to the primacy of the lived or reflected consciousness the primacy of the concept, of the system and of the structure. And it happens that this philosopher who does not believe in history, in the existential sense, refutes in advance, by the action he carries out and by which he feels carried / action he leads whilst feeling led, through his carnal participation to history and by his historical death, the existential argument of those who seek today to discredit what they call structuralism by condemning it to engender, among other misdeeds/misdemeanors/damages, passivity before the accomplished [fact].

Ordinarily, for a philosopher, to undertake to write a moral, is to prepare to die in one's own bed. But Cavaillès, at the very moment where he did everything that he could when one has the wish to die in combat, composed a logic. He thus gave his moral, without needing to write/compose it. Such was the man that students like yourselves could have today as master/teacher and that they have not because he was as I have attempted to paint him.

To a question posed/asked by a professor of the University of Strasbourg : "Why

professors?", a professor of the University of Strasbourg, Jean Cavaillès has given an answer more brilliant/bright/devastating ~~even~~ through his death as a combatant than by his life as professor. Why professors? To know, on occasion, to give a lesson of action to those who judge this two notions incompatible. Cavaillès, philosopher combatant, teaches to the men said of action that action is not an inconsistent and loose/cowardly empirical practice. Cavaillès, philosopher mathematician, nourished by poetry, who cited Rimbaud in his lessons on experience(1), who said he believed to be inside the world of the *Bateau Ivre*, by contemplating for the first time the port of Strasbourg(2), teaches to the literary terrorists that before being the sister of dream, the action must be the daughter of rigor.[51]

1. *Ibid.*, p. 131.
2. *Ibid.*, p. 235.

[51] trans. note : in the sequence of passages, pages 27-30, attacks against existentialism, and even more specifically Sartre (mentioned before), abound and rise in intensity. The targets become clearer in the later talks, and even more relentless and caustic to the point of being unbearable sometimes. The glaring paradox being that the philosophers of existence, for having such measly accomplishments, should have been the talkative theoreticians of the "engagement" (so called!) [Sartre knew the bistros and cafes better than the battlefield, Paris better than Southern France...] Especially expression "literary terrorists", unforgiving as it is, should leave little doubt as to who is meant i.e. Sartre's signature blend of literature and philosophy. Targeting of literary-inclined philosophers is resumed at the beginning of the next talk.

COMMEMORATION AT THE ORTF
(France Culture, October 28th, 1969)

To[52] tell of what I have seen and known of Jean Cavaillès, since our meeting at the École Normale Supérieure would be too lengthy. To keep things short in this matter would be the same as being insignificant.

I will thus say simply what idea I make of the relation between his person and his action in the Resistance. I'll insist first on the fact that for Cavaillès, the Resistance had been an imperative pure and simple, without blending/melange. He was not the one who responded to a Call because he awaited a Call. He was not an outlaw for racial or political reasons. He chose the Resistance, in the plain freedom of decision[53] and nevertheless, he thought, conforming to an exigency that inhabited him. Let us try to understand why.

Cavaillès was a philosopher of the rigor. For him philosophy was more akin to mathematics than literature.[54] He thought that philosophizing means demonstrating rather than making confidences on one's own subjectivity.

Cavaillès had good knowledge / was well informed of the German situation in the thirties.

[52]trans. note : Canguilhem previously addressed students, he now intends to talk about Cavaillès to a radio audience, at a time when radio was still a main media. The ORTF was the French public service office for radio. France Culture is the, on-going, respected cultural program. (The same program broadcasted recently a, similar, commemoration of Aaron Swartz.)

[53]trans. note : implication here seems to be that - in the order of propositions - Jews and Communists, and other similarly persecuted and resisting groups, had not chosen their fight "in plain freedom"; a debatable argument (if logically or strictly correct, if at all, morally complicated).

[54]trans. note : Cavaillès' identification with Spinoza is not least owed to that Spinoza is among the most mathematical of the philosophers. Spinoza's Ethics, "demonstrated in geometrical order"(!), is the best exposition or illustration (as close to being written like a mathematical proof as is done in his day, not even matched by Leibniz in texts, supposedly conducted logically, like Theodicee).

He had lived in Germany on a scholarship of the Rockefeller foundation.[55]. Nothing had escaped him as to the causes, the motives, the objectives of Nazism.

Cavaillès was of Protestant origin and son of an officer. He did not share, as a student, the anti-militarist and pacifist opinions of many of us among that generation.

That being known, we can understand that Cavaillès had been a part of the Resistance *by logic*. The deduction is easy. And for anyone who had known him, it is not imaginary. Nazism was unacceptable in so far as it was a negation, savage more than scholarly, of the universal, in so far as it heralded and as it sought the end of rational philosophy. The struggle against *the unacceptable* was thus *inescapable/inevitable*[56]. And by struggle one must not understand the indignation whispered in the corridors, the patriotic door-to-door, the feeding of letter boxes with vengeful tracts.[57] By struggle one must understand the combat carried out arms in hand. And by arms, all arms. There is thus an intellectual who, without any constraint of personal situation, by fully free choice, makes himself chief of [Resistance] network, first and always paying by his person, chief of intelligence agents, of bombers[58], of saboteurs. A chief

[55]trans. note : again, the same mistake, as previously noted.

[56]trans. note : a minor word play lost (fixed by e.g. un-escapable or some other bending).

[57]trans. note : divisions, that continue to exist today, between protesting — the main form recognized as legitimate by liberalism and the capitalist democracies (legitimate because mostly, or relatively, harmless and ineffective) — and the armed fight — condemned by the same so called democracies — are at hand. Especially pernicious are notions of "changing things from within", and, also in the rank of false ideas,[fr]ethical" consumerism, capitalism; which fed the hopes of the last few generations.. Aaron Swartz, to whom we have dedicated many studies, was fully imbued in this culture (Demand progress etc.) until he made the conscious choice of action. [There are, all things considered and with considerable differences in modes of action and times, parallels between the destinies of these two figures.]

[58]trans. note : plastiqueurs. (derived from plastic)

executing, a terrorist philosopher : there is Cavaillès. The facade of a professor of logic at the Sorbonne behind which hides/is concealed first the only activity that is close to his heart does not last for long. From now [on], the sole philosophical activity of this logician is exercised/exerted in prison or in a French internment camp[59] from which besides he escapes, in order to resume where he had left it the clandestine struggle which will lead once more to his arrest, but by the Germans this time, and this time definitely. The logic is implacable. There is in the tenacity of Cavaillès something terrifying. He is a unique figure. A mathematician philosopher loaded with explosives, lucid and fearless, resolute without optimism. If that is not a hero, what is?

Speaking about him goes not without some feeling of shame, since, if one survives him, it is because one has done less than him. But if one doesn't speak of him, who will be able to know to make the difference between this engagement [commitment] without reserve/restraint, of this action without back fiddling[60], and the Resistance of these resisting intellectuals who speak of themselves in such abundance only insofar as they only can speak of their Resistance, so discrete as it was?[61]

[59] trans. note : Montpellier and Saint-Paul, already mentioned, are meant respectively, but left implicit this time.

[60] trans. note : ménagement d'arrières.

[61] trans. note : explicit mention of engagement (twice) now makes fully clear, as already advanced, the targets are Sartre et al.

Currently, some philosophers shout calls of indignation because certain other philosophers have formed the idea of a philosophy without personal subject. The philosophical oeuvre/work of Cavaillès can be invoked to support this idea. His mathematical philosophy was not constructed through reference to some subject susceptible to be momentarily and precariously identified to Jean Cavaillès.[62] This philosophy from which Jean Cavaillès is radically absent has commanded a form of action that has conducted him, through the tight paths/roads of logic, until this passage from which one never returns. Jean Cavaillès, is the logic of the Resistance lived right up to the death. May the philosophers of existence, of the subject, do as well, next time, if they can.

[62] trans. note : idea suggested, very interesting, being that the precarious conditions in which Cavaillès' work was undertaken (aforementioned clandestine activity, imprisonment, internment etc.), including the need to preserve anonymity, are reflected in the specific style of his philosophy, in which personal references are barely found or not at all, and a philosophy of mathematics "without Cogito". (And, likewise, the inverse implication, less dignifying, that those who were not engaged in similar Resistance were more free to form a chatterbox philosophy, full and overflowing with subjectivity...)

COMMEMORATION AT THE SORBONNE
(Cavaillès Room, January 19th, 1974)

Why 30 years later?[63] Why not every year, if not every day?

Thirty years have passed, it is the certitude that none of those, none who comes to educate oneself — or be bored — in the class room that is personalized by the name of Jean Cavaillès, was born at the moment when he lost his life. Yet among the philosophy teachers of the University of Paris I[64] some have had Cavaillès for master, others had him as comrade and classmate. That one of them has had the thought to tie, for some instants, a living link of evocation between those who have known the man and those for whom the man is only any more his oeuvre/work, what more natural and more generous at the same time? Thus is legitimated, I think, this invitation to testimony in a place of teaching.

It does not escape me that the commemoration favors ordinarily a style of discourse carried with difficulty by minds led to question the titles that the university institution credits Men and works of which it claims to be the guardian.

[63] trans. note : the talk is given in 1974 (based on a year of death in 1944).

[64] trans. note : a further change in context has intervened, with the previously alluded to dismantlement and dividing of the old University into multiple components.

But, maybe you already suspect that, talk being of Cavaillès, the simple and naked reminder of the reasons and the circumstances of his death entail in itself a justification, exclusive of any excuse.

More preoccupation should be given, as is otherwise done, to the fashion/manner in which academics die, when it occurs to them to not die of disease or old age, and singularly the philosophers, for whom the duty entails in part, according to the Stoics[65], to learn how to die.

Those who are still alive, having the age that Cavaillès would have, if our present reunion was a matter of uchronia, can count those who died arms in their hand, like Maxime David in the First World War, like Stéphane Piobetta in the Second, and those who, in the terrible years of the Nazy oppression in Europe, have paid with their life their reflected engagement inside the troupes of clandestine combatants, without uniform and without judicial status[66]. Among the latter, Cavaillès, Gosset[67], Pierre Kaan, Cuzin, Lautman[68], Feldman, Politzer. I forget some no doubt.

As all collective human enterprises, the Resistance to the occupier/occupying force has known

[65]trans. note : a different doctrine of the Stoics opens *Formation...*

[66]trans. note : allusion to the corps franc. here left implicit (mentioned in the first talk).

[67]trans. note : Jean Gosset, Cavaillès' adjunct (also mentioned in the first talk, including a brief presentation).

[68]trans. note : Albert Lautman shared many characteristics with Cavaillès : a philosopher of mathematics, former student of the École Normale Supérieure, Resistance member, killed in (that same) 1944. Lautman, who was younger than Cavaillès by about five years, today stands far in the shadow of his elder. Lautman engaged with Cavaillès in 1939 in a debate on mathematics at the French society of philosophy, the text of which was published as "La pensée mathématique" in its Bulletin. It was also to Lautman, described a friend, that Cavaillès gave the annotated copy of "Transfini et continu". C.f. for the latter point the editor's warning.

its disinterested and adroit/skilled [people], those who were active and talkative, heroes and ambitious ones, to not say anything of / let alone the swindlers/crooks and traitors. History has retained a few exemplary figures and those who survived have, in common, this exemplary characteristic also to know and to say all that the efficiency of their struggle has owned to the cooperation, courageous, patient, silent, of a host/group of men and women who never thought to do more than their duty and merit to enter history.

Among these exemplary figures, I would like to try to show why that of Cavaillès is exceptional.

Let's convene frankly. The intellectual opposition to the national-socialist ideology, to a counter-philosophy ferociously hostile to any form of universality, was almost granted for a French philosopher, formed between the two wars in[side] a tradition of rationalism, revivified at the beginning of the XXth century by a strengthening[69] of attention paid to the difficulties and paradoxes of the mathematical philosophy.[70] Dead thirty years before Cavaillès, in 1914, another mathematician philosopher, Louis Couturat, had prolonged, in the fashion of Leibniz, his logic[al] researches in[side] a project for the constitution of a universal language,

[69]trans. note : renforcement. C. is playing again, it seems to us, with the subtle infusion of military language (here and elsewhere).

[70]trans. note : implicit reference to Russell and Whitehead, *The Principles of Mathematics* and *Principia Mathematica*, at least.

pacifist instrument of internal cooperation.[71] It is the same irenics that had pushed Couturat to correct strongly/thoroughly[72] Ferdinand Brunetière, the bard [chantre] of the "bankruptcy/failure/collapse of science"[73], for a strangely nationalist interpretation that he had given to *Perpetual peace: a philosophical sketch* by Immanuel Kant.

But it is one thing to draw in a philosophical conviction the will to keep a cold head before an ideological delirium, another to risk one's head in a combat, initially dubious, against a political regime militarily victorious. To take back a famous word/phrase, it is a far stretch from the arms of the critique to the critique of arms.[74] Yet the specificity of Cavaillès is to have grasped — should I say intuitively? — the unity. He himself said he was Spinozist, before and during the combat. Spinozist, is it not the one who has understood the Corollary according to which "[the] will and [the] understanding/intellect are one and the same thing" and who read to the end the corresponding Scholium : "This doctrine is useful to common society in that it teaches the condition following which the citizens must be governed and directed, not to be slaves, but so as to freely do the best"?[75] Spizonist this one who, already in 1931, wrote : "In everything we are conducted."

[71] trans. note : Couturat's Ido language, derived from Esperanto.

[72] trans. note : reprendre vertement.

[73] trans. note : le chantre de la "faillite de la science". The articles "Après une visite au Vatican" and "Voulons-nous une église nationale?" contain the expression or similar "banqueroute de la science". Found in Brunetière's collection volume *Questions actuelles.*

[74] trans. note : a reference to Marx, and the Critique of Hegel's philosophy of right. The passage meant specially is from Contribution. In one English translation : "*The weapon of criticism certainly cannot replace the criticism of weapons; material force must be overthrown by material force; but theory, too, becomes a material force once it seizes the masses.*" (Cambridge University Press, p. 137)

[75] trans. note : Proposition 49, at the end of the Second Part of *Ethics.*

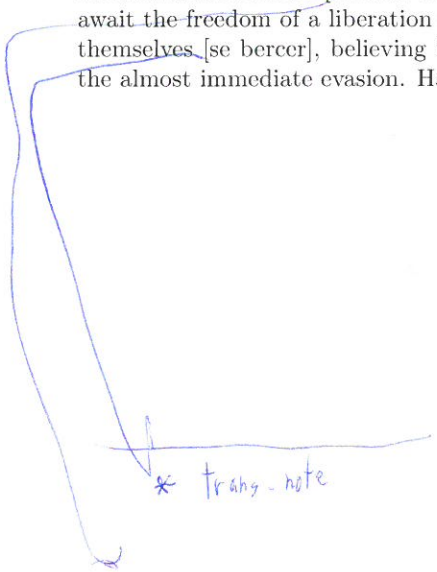
Spinozist the one who, taking his distances from the philosophers of the consciousness, still found too many allusions to the *Cogito* in the philosophy of Husserl. It seems to me that if we do not deepen, on this question, his Spinozism, the fulgurating declarations of Cavaillès, we do not understand the singular style of his action of resistance.

On this point, I cannot conceal my disagreement with a judgment passed on him in the book, besides very estimable, that Simone Pétrement has dedicated to *The Life of Simone Weil*[76]. In her narrative of the steps that Simone Weil undertook, in London, in the last moments of her life, to be sent to France, charged with a mission of which she herself had the idea, Simone Pétrement reports the meeting that Simone Weil had with Cavaillès, then on a mission in London, through the intermediary of Maurice Schumann. I quote : "He was even a bit irritated by her insistence. For him it could not be a question of a particular vocation; he thought that each should serve where they are placed and that it is not up to them to decide. He had abolished in himself the intellectual and was only any more a soldier. He said of Simone : "It is a case of exceptional nobility, but today there is no longer any case." "

[76]trans. note : *La Vie de Simone Weil* i.t.o..

What Simone Pétrement attributes to the spirit of discipline it appears to me should be attributed to the philosophical rigor that found in a situation both imposed and chosen the mirror in which many philosophers have rarely had the occasion to see themselves, that of the non premeditated encounter between their philosophy and world history. "There is no case any longer", is not the word of a man who has abolished in him the intellectual, it is the word of a Spinozist mathematician who conceives action under a certain aspect of universality, of non-subjectivity, if one can say so.

And I see the confirmation in the conduct of Cavaillès. Since he did not hold himself for "a case", he never thought that, in the distribution of clandestine tasks, it could be that his "case acknowledged" his person. He therefore has, not played all roles, because these were not roles, but did indeed assume all risks. Officer of the corps franc, at the beginning of the war, he behaves as an enforcer [homme de main]. Prisoner in June 1940, he does not await the freedom of a liberation in the illusion of which many had deluded themselves [se bercer], believing it be approaching. He takes his liberty in the almost immediate evasion. Having become professor again



in Clermont-Ferrand, where the university of Strasbourg was folded back, he coordinates the spontaneous resistance of Alsatian students and some of their masters/teachers. By the way, the movie which, under the title *Le Chagrin et la Pitié* [The Sorrow and the Pity], has thought to give, from the angle of Clermont-Ferrand, an image of the life of the French under the occupation, has curiously omitted everything that concerns the resistance of academics.

Co-founder, with Emmanuel d'Astier de la Vigerie, of the movement *Libération*, Cavaillès is far to confine himself to the anti-Nazi and anti-Vicy propaganda by the way of the tract, the bulletin or the brochure. Called to Paris as a substitute professor at the Sorbonne, constantly under the threat of arrest, since his presence is public under his own name, he becomes the man of multiple identities, and it is under one of them that he founds a network of intelligence and direct action, the famed *Cohors* network. It seems superfluous to me to mark the difference in responsibility and risk between the ideological activity of a militant and the activity of military sabotage. In this "Cavaillès Room" it is not possible to not evoke today a few other names : Carpentier, Marty, Chennevières,

Carrière, Hervé, Crillon, and I skip some. All these names are the false names of the real Cavaillès. Under these names hide different figures, the member of the directing committee of *Libération*, the intelligence agent, the agent of liaison with London, the carrier of explosives, the mechanic wearing a boiler suit who penetrates in Lorient inside the submarine base of the Kriegsmarine. Among the figures of Cavaillès resistant, there was even, at the beginning, a possible figure — but by no means imaginary —, that of a maître d'hôtel / butler at the Crillon, false certificates in pocket. At the Crillon, the hotel of Adolf Hitler during his visit in Paris. It is easy to guess why.

There is who Cavaillès was, in all of his faces, whose friends remember the face that they knew during his twenty-ninth and thirtieth year. A face grave but luminous, face expressive of a mind/spirit as demanding for himself as for others. A face that finds this room again, that this room finds again, under the kind/species of a portrait that hides, like the symbolic compositions of the painters of the Renaissance, a secret : in the journal that Cavaillès presses under

the left arm are contained tracts of which he is the carrier.[77]

"There is no case." That is why, as I have said it elsewhere, another time, Cavaillès had been philosopher and terrorist, chief and executor, professor at the Sorbonne and a Resistance member of the street of Docteur-Roux[78], prisoner of the French State in the camp of Saint-Paul d'Eyjeaux and composing his study on *The logic and the theory of science.*

Arrested by the German services of counter-espionage, Cavaillès recognizes, in the course of his interrogation, all the facts that concerned him. He justified his conduct by the death of René Parodi, by the family tradition — his father was an officer — and by the philosophical vocation. Speaking to Germans, he made reference to Kant. It would have been in vain to evoke Spinoza.

There goes, naturally, much routine and automatism in the relation between a teaching and the place where it is proposed and received. It is therefore not likely that the name of Jean Cavaillès has transformed or must transform fundamentally such a relation in favor of this here room.

[77]ed. note : we have placed this portrait at the end of the talk. As for the War group photo reproduced at the beginning we have no precise date, but it can be assumed to have been taken some time between 1939 and end 1943 (corresponding to the extremes of Cavaillès joining the Corps franc and his ultimate arrest).

[78]trans. note : Paris (15th district).

But it is not forbidden to think that in the future, when the students and the comrades of Cavaillès will have all left this university, some students, curious about life and the death of a man whose oeuvre they will study, will find there the example suited to support them in these sorts of circumstance where the decision to take is on a sharp edge.

"There is no case." But one should not choose the wrong cause / be mistaken about the cause. This is I believe, the lesson of the one that the Germans have executed in Arras, in January 1944. Thirty years, already.[79]

[79]trans. note : Spinoza, *Ethics*, in Proposition 67 writes : *A free person thinks about death less than anything, and his wisdom is a meditation not on death but on life.* This proposition, not evoked by Canguilhem, seems however fitting. And in the corresponding Proof : *A free person, i.e. a person who lives solely by the dictate of reason, is not led by the fear of death ..., but directly desires good.* 80 years already... C. A., July.